EDITORIAL

Evolution of Networks

Anne Bernard of the International Development Research Centre, Canada, has recently written a paper entitled *Discussion Paper on Networks: A Point of Departure* (IDRC, Ottawa 1994). In the paper, Dr. Bernard brings up some interesting issues on the evolution of networks. Dr. Bernard writes: "networks, as social organizations, must adapt over time to the contexts in which they exist. In research, there are new methodological and topic demands — the push for greater interdisciplinary and participatory approaches, for research on the environment and its integration with economic and social policy and more explicit use and impact of results at the policy, and 'social change' level. In broader development terms, funding is declining, donors themselves are 'networking' toward more coherent, focused activity. All of this implies that networks must respond accordingly."

The AFSSRN has been very dynamic, evolving in many ways since its inception. We have added new members, new disciplines, additional new research topics, found new beneficiaries for our research, and increased our collaboration. As we move into new countries in Asia (Vietnam, China, Cambodia), we are both giving knowledge and receiving it. Scientists who have been isolated from new information and methodologies are gaining access to it. As the size of the Network grows, we are in many ways becoming smaller through increasing our knowledge base.

The rapid advancement of computer and electronic technology can increase our communication linkages. E-mail and the "information superhighway" have already made it possible to network with other scientists around the world. This new technology is opening up new ways of thinking about networking and more possibilities to communicate. The isolation and marginalization of those excluded from networks due to access, money, language, politics and/or knowledge base can be overcome.

The future of the AFSSRN will depend upon us continuing to evolve. We must utilize new methods of communication to support both our members and our colleagues outside the Network. ***R.S. Pomeroy***

Learning from Fishers: Indigenous Knowledge and SEAFDEC's Community Fishery Resource Management Project

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Introduction

Indigenous knowledge has recently become the topic of research of both social and natural scientists. In fisheries, there are at least four reasons why researchers, development workers and policymakers must understand the indigenous knowledge shared by a particular community.

First, indigenous knowledge constitutes a community's adaptation to its environment. Adaptation here means the way fisherfolk harness the resources of their environment in order to establish a viable relationship to it (Jocano and Veloro 1976).

Second, according to Smith (1981), solutions to problems in fisheries lie outside the sector. This assertion underscores the necessity of understanding the complexities of a fishing community before any intervention designed to uplift its standard of living is recommended and implemented.

Third, within the context of a common property resource like fishery, it is important to identify the different groups that have stakes in changes that could occur in institutional arrangements and access to the resources (cf. Ruddle 1988).

Finally, fisheries management would benefit from the fishers' time-tested practices. Johannes (1981) stated that: "Political, economic, cultural, and social dimensions of a fishery severely restrict the effectiveness of management programs based solely on the biology of stocks. One must study fishermen as well as fish. Understanding fishermen's customary practices of resource allocation, for example, will help define the context in which biological information may best be employed in managing a fishery."

The Study Area

Malalison Island is located in Panay Island, central Philippines and belongs to the municipality of Culasi in northern Antique. The island has a total land area of 55 hectares, 12 hectares of which comprise the village.

Subsistence fishing dominates the livelihood of the islanders. The term

subsistence fishing as used here refers to a widespread pattern of economic activity which involves heavy dependence upon small-scale production of marine resources, largely for home consumption, and for sale or exchange in nearby households or markets, again for immediate home consumption (Szanton 1971).

Sea World

Malalison is surrounded by natural reefs whose names have been handed down through generations (cf. Jocano and Veloro 1976; Forman 1980; Cordell 1980; Nietschmann 1985). *Bahura* or *takot* are terms used to refer to any coral reef. However, a coral reef or fishing area is differentiated from one another by its name which is usually derived from landmarks.

Islanders use the unit *dupa* or fathoms. Contrary to the general practice where distances are expressed in kilometers or miles, the islanders reckon distances in terms of fathoms (cf. Forman 1980).

To be able to mark their fishing areas, islanders use *palangat*, a system of triangulation using landmarks as points of reference (cf. Forman 1980). This is similar to *dahil* employed by San Antonio fishermen along Laguna de Bay (Jocano and Veloro 1976). One *palangat* differs from another in that each fisher establishes his/her own reference points.

The Islanders distinguish seven types of wind direction depending on their source (cf. Jocano and Veloro 1976). These are *kanaway* from nearby Batbatan Island; *buyayaw* from Caluya Island which is farther north; *amihan* from Pucio Point, the northernmost tip of Antique province; *tugpo* from Mt. Madja-as, the mountain range overlooking the island's eastern side; *timog* from Lipata; *habagat* from Seco Island (11°19' north latitude and 121°40' east longitude) and *salatan* from San Jose in the southern part of Antique.

Introduction to Fishing

In Malalison, a boy as young as seven years old already knows how to fish (cf. Johannes 1981). As soon as a boy learns to swim, he could already use a spear in shallow waters. He then learns the skill of using hook and line by accompanying his father or male relative during fishing trips (cf. Ruddle 1991).

Fishing Practices

Of the 74 households in Malalison, 59% are boat owners. Majority of the boats are hand-paddled, 22% are motorized, and 19% are sailboats.

Hook and line is the major fishing gear in the island, followed by spear and net fishing. The variations developed by islanders for each of these gears is in itself an illustration of the complexity of a small fishing community. Hook and line fishing alone has at least nine variations, spear fishing has five and net fishing has eight. Each variation is intended for catching specific species of fish, others are used during a certain period or season.

Net fishing was introduced 39 years ago. Blast fishing had been rampant in the island until the 1980s. The use of cyanide for catching ornamental fish and *mamsa* (*Caranx*) was also practiced. *Duldog*, the island's version of *muro-ami* which was prohibited by Fisheries Administrative Order No. 163 in 1986, was introduced to the island by Japanese fishers before World War II. A *duldog* operation involves 40-80 persons and four to six boats. Catch could range from 200 to 300 kilograms per operation, consisting of fusiliers and surgeonfish.

Shell gathering during low tide is another activity engaged in by the islanders, especially women and children. This is made easier by time-tested tips. For example, two small holes in the sand indicate the presence of *punaw* or hen clam buried about two inches deep. Two bigger holes, usually covered with a stone, signifies the presence of *tambayangan* or razor clam about six to nine inches deep. A reddish, lip-like object protruding in the sand indicates the presence of *barabakalan* or blood clam. Other activities during low tide include gathering of *tirik* or sea urchin and *balat* or sea cucumber. If water is knee-deep, coconut or cooking oil is sprinkled over the water surface using a ball of used cloth to increase visibility of the water bottom. This practice is termed as *pasiling*.

Major species found in Malalison are fusiliers, surgeonfish, mackerels, groupers, garfish, emperors and parrotfish.

Although fishing as described here is specific to Malalison, the islanders are not quite unique. The literature shows that Malalison fishers are no different from San Antonio fishers along Laguna de Bay, or the islanders of the Torres Strait, or the raft fishers and shore dwellers of Brazil, who possess a system of naming sea space and marking specific fishing spots through the use of landmarks.

Acknowledgement

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NEWSBITS

Team Leaders' Meeting in Taiwan

A REDUCED TEAM LEADERS' MEETING was held in Taiwan in conjuction with the IIFET conference. Each Network member-country was represented by two team leaders. Among matters discussed were: Phase IV planned activities, member-country workplans, publications and expansion of Network membership.

Dr. Pomeroy, AFSSRN Coordinator stated the generally good results of the 17 projects funded under Phase III, which ended in March 1994. Phase IV, which commenced in April, will have the following major activities: regional team leaders' meeting, exchange visits, regional trainings, national training workshops and development of new methodologies.

Dr. Pomeroy reported on efforts to tie-up Network activities with other larger projects such as ICLARM's Fisheries Co-Management Project and the Dutch Government Project in Vietnam. Countries which are being considered for membership are Vietnam, Cambodia and China.

A regional training on natural resource policy analysis will be conducted, tentatively for November 1994. This activity will be tied up with the Environmental and Natural Resources Policy and Training Project (EPAT) of the Winrock International Environmental Alliance.

Training-Workshop in Vietnam

A TRAINING-WORKSHOP on social science research methods will be held on 4-9 October in Hanoi, Vietnam. The five-day training aims to introduce social science research methods to Vietnamese researchers. The Vietnamese have identified training as a high-priority activity. One of the first training courses they requested is on social science research methods. Expert trainors from the University of the Philippines at Los Baños will conduct the training. This will be the Network's first activity in Vietnam.

Research Reports Series for Members

THE AFSSRN RESEARCH REPORTS SERIES are now available for Network members. These are research studies completed by the Network members under Phase III. Initially, four reports have been reproduced. These are: 1) *Rice-Fish Culture in the Philippines: An Output Risk Programming Analysis* by Danny C. Israel, Ruben C. Sevilleja, Antonio V. Circa and Rogelio D. Cocio; 2) *Economic Assessment of Shrimp (*P. monodon*) Hatchery Industry in Panay Island* by Renato F. Agbayani, Giselle PB Samonte, Fe E. Parado, Reuel T. Tumaliwan, Rolando S. Ortega and Larni A. Espada; 3) *Enforcement and Compliance with Regulations in the Malaysian Fishery* by K. Kuperan Viswanathan; and 4) *Estimating Input Demand and Output Supply Elasticities in Gillnet and Seine Fishing in Guimaras Strait and Adjacent Waters* by Cecilia T. Pestaño and Rogelio F. Subade.

Staff Travel

DR. ROBERT S. POMEROY, AFSSRN Coordinator, attended the International Workshop on Traditional Marine Tenure and the Sustainable Management of Marine Resources in Asia and the Pacific on 4-8 July, in Fiji. He presented a paper entitled *Traditional Base for Fisheries Development: Revitalizing Traditional Community-Based Resource Management Systems in Southeast Asia.* The workshop was sponsored by UNDP, CIDA, UNESCO and the French Government.

From Fiji, Dr. Pomeroy proceeded to Malang, East Java, Indonesia, where he participated and delivered a lecture at the workshop of the Indonesian Fisheries Socioeconomic Research Network (IFSERN). Dr. Pomeroy gave a lecture on fisheries co-management and community-based resource management. The workshop was coordinated by the Faculty of Fisheries of Brawijaya University in Malang.

Dr. Pomeroy and Michael Pido also attended the IIFET Conference in Taiwan on 18-21 July where they presented papers. The AFSSRN Team Leaders' Meeting and Co-management Project Steering Committee meeting were also held in Taiwan. From Taiwan, Dr. Pomeroy flew to Canada where he met with collaborators at the Simon Fraser University and University of British Columbia.

Network Member Pursues Ph.D. Studies

NETWORK MEMBER SUSANA SIAR of SEAFDEC in Iloilo took a study leave to pursue her Doctoral Degree in Geography at the University of Hawaii at Manoa, Hawaii. She is a recipient of an East-West Center fellowship.

Co-Management Workshop in Palawan

THE FISHERIES CO-MANAGEMENT PROJECT held a conference on 12-13 September 1994 in Puerto Princesa City, Palawan. This forum was entitled "Co-Management of Marine Fisheries and Other Coastal Resources in Palawan: Concepts and Experiences." This activity was in cooperation with the Palawan Council for Sustainable Development Staff (PCSDS). This forum aimed to: 1) discuss the experiences in co-management and community-based management of marine fisheries and other coastal resources in Palawan; 2) impart some lessons and generalizations from the above experiences; 3) identify the potential research sites for ICLARM's Fisheries Co-Management Project; and 4) coordinate efforts of various local, national and international agencies towards the co-management of Palawan's fisheries and other coastal resources.